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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,298	12/11/2001	John A. Richards	3421.1	1430

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EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 12/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/683,298

Applicant(s)

RICHARDS, JOHN A.

Examiner

My-Chau T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 and 23-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group II (i.e. claims 5-22) in Paper No. 6 (1/13/03) is acknowledged.
2. Claims 1-4 and 23-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6 (1/13/03).
3. Claims 5-22 are treated on the merit in this Office Action.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "yaw" in claims 15, 20, and 21 is used by the claim to mean "a reference plane", while the accepted meaning is "to turn about the vertical axis." The term is indefinite because the specification does not clearly redefine the term.

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6. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “gantry” in claim 19 is used by the claim to mean “an arm wherein the first mounting assembly is connected”, while the accepted meaning is “a platform that support a crane.” The term is indefinite because the specification does not clearly redefine the term.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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8. Claims 5-6, 10-12, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayes et al. (US Patent 5,658,802).

Hayes et al. disclosed an apparatus that inject and arrange small liquid droplets in predetermined patterns on a solid support (col. 1, lines 4-10). The apparatus comprises of dispenser assemblies (plurality of deposit elements) (col. 4, lines 43-47) (refers to claim 6), an ejection device that comprises a housing, which house the dispenser assemblies (first mounting assembly) (col. 4, lines 11-14), and a second position support system (second mounting assembly) (col. 4, line 59 to col. 5, line 8), and a first position support system (third mounting assembly) (refers to claims 5 and 22). The second position support system moves the apparatus for translation in two directions (col. 5, lines 1-6), and the first position support system move for translation in one direction (col. 5, lines 1-6). The substrate is “flat” and is mounted on a substrate support (col. 4, lines 48-58) (refers to claims 10-12). Therefore, the apparatus of Hayes et al. anticipates the presently claimed apparatus.

9. Claims 5-6, 10-13, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ackley et al. (US Patent 5,733,509).

Ackley et al. disclose a system for synthesizing an array of oligonucleotides probes on a substrate (col. 1, lines 7-9). The system comprises of a plurality of dispensing heads (plurality of deposit elements), a first dispensing bar (second mounting assembly), a second dispensing bar (third mounting assembly) (col. 2, lines 30-39), and a positioning mechanism (first mounting assembly) (col. 3, lines 35-49) (refers to claims 5 and 22). The dispensing head deposit a control volume of nucleotides bases to a location on the substrate (col. 3, line 5-10) (refers to claim 6).

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The substrate is a planar shape (col. 2, lines 9-15), and is placed on a loading station (col. 4, lines 16-23) (refers to claims 10-13). Therefore, the system of Ackley et al. anticipates the presently claimed apparatus.

10. Claims 5-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. (US Patent 5,807,522).

Brown et al. disclosed an apparatus for fabricates microarrays of biological samples on a solid support (col. 1, lines 15-19; col. 3, lines 52-58; col. 9, lines 53-56). The apparatus comprises a dispenser device that comprises a plurality of dispensers (col. 4, lines 12-15; fig. 1, ref. #10) (a plurality of deposit elements; refers to claim 6), which are carried on the arm (refers to claim 9), and a structure (first mounting assembly) that move the dispenser toward and away from the support surface (first axis perpendicular to the depositing surface) (col. 7, lines 17-30). The apparatus also comprises a positioning support that moves the dispenser device along the x-y axes (col. 3, lines 59-65; col. 10, lines 7-50) (refers to claim 7) wherein the positioning support comprises a displacement assembly (second mounting assembly) that move the dispenser device along the x-axis (second axis) (col. 10, lines 7-28, fig. 4, ref. #80, 82, 84, & 86) and a structure (third mounting assembly) that move the dispenser device along the y-axis (third axis) (col. 10, lines 29-50; fig. 4, ref. #90, 92, 94, 96, & 98). The displacement assembly has two modes wherein in one mode the assembly function to move the dispenser in x-axis increments and the second mode is to move the dispenser unit in x-axis increments for positioning (col. 10, lines 22-28). The structure has two modes wherein in one mode the assembly function to move the dispenser in y-axis increments and the second mode is to move the dispenser unit in y-axis

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increments for positioning (col. 10, lines 41-46). Further, the apparatus comprises a holder that holds a plurality of supports (col. 10, lines 51-53; fig. 4, ref. #102). The support comprises a glass slide (col. 4, lines 25-26) (refers to claims 10-13). Therefore, the apparatus of Brown et al. anticipates the presently claimed device.

11. Claims 5-12, and 14-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang (US Patent 6,511,849 B1).

Wang discloses an apparatus for forming a microarray of biological materials on a substrate (col. 2, lines 2-3; fig. 1). The apparatus comprises a platform (ref. #14) (holding element), a first linear guide (ref. #2) (second mounting assembly), a second linear guide (ref. #3) (third mounting assembly), and a third linear guide (ref. #4) (first mounting assembly) (col. 3, lines 24-65; figures 1-2). The third linear guide is perpendicular to the first linear guide and second linear guide (col. 3, lines 55-58; figures 1-2) (first axis). The first linear guide is perpendicular to the second linear guide (fig. 2) (refers to claim 7). The third linear guide is attached to a sampling manifold (ref. #9), which contains four sampling needles (ref. #8) (col. 4, lines 4-16; fig. 3) (plurality of deposit elements; refers to claim 6). The platform holds a series of substrates (ref. #12) (col. 3, line 39). In operation, the substrates are placed on the platform that is mounted on the first linear guide, which move into position for the sampling manifold to dispense the sample onto the substrate (col. 4, lines 53-67). The sampling manifold is attached to the third linear guide that lower the manifold to the substrate in order for the sampling manifold to dispense the sample onto the substrate. Therefore the apparatus of Wang anticipates the presently claimed apparatus.

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12. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Roach et al. (US Patent 5,770,151).

Roach et al. disclose an apparatus for depositing biological molecules on a substrate to form a microspot array (col. 1, lines 5-9; fig. 1). The apparatus comprises of a capillary member (ref. #10) (biological deposit element), a pod (ref. #14) (first mounting assembly), an arm (ref. #16) (second mounting assembly), and a cross member (ref. #18) (third mounting assembly) (col. 3, lines 54; fig. 1). The pod facilitates the capillary member movement in the Z direction (first axis), the pod and arm facilitates the capillary member movement in the X direction (second axis), and the pod and the cross member facilitates the capillary member movement in the Y direction (third axis). Therefore, the apparatus of Roach et al. anticipates the presently claimed apparatus.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Chau T. Tran whose telephone number is 703-305-6999. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Wang can be reached on 703-306-3217. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.



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mct

December 28, 2003

  
PADMASHRI PONNALURI  
PRIMARY EXAMINER